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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER

PHAN, HANH

ART UNIT PAPER NUMBER

2638

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Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

1. The original claims 1-30 now are re-numbered to claims 1-31 because there are two claims 15.

2. In claim 16, line 7, the phrase "using matching criteria. analyzing signal characteristics of channels" should be change to -- using matching criteria; and analyzing signal characteristics of channels --.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

-In claims 1, 16, 28 and 31, it is not clearly stated **how the channels using matching criteria** defines.

5. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

-Claim 11 recites the limitation "**the match**" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 5-8, 10-19 and 21-29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander et al (US Patent No. 5,986,782) in view of Kaharu et al (US Patent No. 5,130,836).

Regarding claims 1, 16 and 31, referring to Figure 2, Alexander teaches a method comprising:

determining a first set of suitable channels carrying optical signals in a first direction (i.e., determining a first set of suitable channels carrying optical signals such as $\lambda_1, \lambda_2, \dots, \lambda_j, \lambda_\alpha, \lambda_\Omega$ in a first direction from East to West and a second set of suitable channels carrying optical signals such as $\lambda_1, \lambda_2, \dots, \lambda_j, \lambda_\alpha, \lambda_\Omega$ in a second opposite direction from West to East, Fig. 2, and see from col. 3, line 55 to col. 6, line 22).

Alexander differs from claims 1, 16 and 31 in that he does not specifically teach comparing the second set of suitable channels against a channel in the first set of suitable channels using matching criteria. However, Kaharu in US Patent No. 5,130,836 teaches comparing the second set of suitable channels against a channel in the first set of suitable channels using matching criteria (Figs. 1 and 3, col. 1, lines 22-67, col. 2, lines 1-53, col. 4, lines 30-67 and col. 5, lines 1-9). Therefore, it would have been

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obvious to one having skill in the art at the time the invention was made to incorporate the comparing the second set of suitable channels against a channel in the first set of suitable channels using matching criteria as taught by Kaharu in the system of Alexander. One of ordinary skill in the art would have been motivated to do this since Kaharu suggests in column 1, lines 22-67, col. 2, lines 1-53, col. 4, lines 30-67 and col. 5, lines 1-9 that using such comparing the second set of suitable channels against a channel in the first set of suitable channels using matching criteria have advantage of allowing monitoring and identifying the channels.

Regarding claims 2 and 17, Alexander further teaches analyzing signal characteristics of channels in the first and second directions (Fig. 2).

Regarding claims 3 and 18, Alexander further teaches wherein the determining further comprises: selecting the channels in the first and second directions for analysis based on quality criteria (col. 4, lines 49-67 and col. 5, lines 1-67).

Regarding claims 5 and 19, Alexander further teaches accessing an optical fiber carrying signals in the first and second directions and extracting the channels from the optical fiber (Fig. 2).

Regarding claim 6, Alexander further teaches accessing a first optical fiber carrying signals in the first direction and a second optical fiber carrying signals in the second direction and extracting the channels from the first and second optical fibers (Fig. 2).

Regarding claims 7 and 21, Alexander further teaches recording the signal characteristics of the channels in a data store (Fig. 2).

Regarding claims 8, 14, 15 and 22, Alexander further teaches outputting the signal characteristics of the channels (Fig. 2).

Regarding claims 10, 12, 13 and 23-27, the combination of Alexander and Kaharu teaches detecting a match between the channel in the first set of suitable channels and one of the channels in the second set of suitable channels (col. 1 of Kaharu, lines 22-67, col. 2, lines 1-53, col. 4, lines 30-67 and col. 5, lines 1-9).

Regarding claim 28, referring to Figure 2, Alexander teaches an apparatus comprising:

a plurality of optical wavelength filters (i.e., wavelength selecting devices 54, Fig. 2) to extract channels from a plurality of optical fibers (i.e., channels such as λ_1 , λ_2 , ..., λ_j , λ_α , λ_Ω extracted from optical fibers 40, Fig. 2);

a plurality of optical signal analyzers (i.e., power meters 56, microprocessors 58 and mode control processor 64, Fig. 2) coupled to the plurality of optical wavelength filters (i.e., wavelength selecting devices 54) to analyze signal characteristics of optical signals in the channels and further coupled to a data store to record the signal characteristics in the data store (see from col. 3, line 55 to col. 6, line 22).

Alexander differs from claim 28 in that he does not specifically teach a matcher for comparing the second set of suitable channels against a channel in the first set of suitable channels using matching criteria. However, Kaharu in US Patent No. 5,130,836 teaches comparing the second set of suitable channels against a channel in the first set of suitable channels using matching criteria (Figs. 1 and 3, col. 1, lines 22-67, col. 2, lines 1-53, col. 4, lines 30-67 and col. 5, lines 1-9). Therefore, it would have been

obvious to one having skill in the art at the time the invention was made to incorporate the comparing the second set of suitable channels against a channel in the first set of suitable channels using matching criteria as taught by Kaharu in the system of Alexander. One of ordinary skill in the art would have been motivated to do this since Kaharu suggests in column 1, lines 22-67, col. 2, lines 1-53, col. 4, lines 30-67 and col. 5, lines 1-9 that using such comparing the second set of suitable channels against a channel in the first set of suitable channels using matching criteria have advantage of allowing monitoring and identifying the channels.

Regarding claim 29, Alexander further teaches a plurality of optical taps (i.e., taps 42, Fig. 2) coupled to the plurality of optical wavelength filters to provide access to the channels in the plurality of optical fibers.

8. Claims 4 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander et al (US Patent No. 5,986,782) in view of Kaharu et al (US Patent No. 5,130,836) and further in view of Saito (Pub. No.: US 2002/0024692 A1).

Regarding claims 4 and 20, Alexander as modified by Kaharu teaches all the aspects of claimed invention except fails to specifically teach detecting optical signals in the channels that represent a conversation of interest. However, Saito teaches detecting optical signals in the channels that represent a conversation of interest (see Fig. 4 and paragraphs [0048]-[0052]). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the detecting optical signals in the channels that represent a conversation of interest as taught by

Saito in the system of Alexander modified by Kaharu. One of ordinary skill in the art would have been motivated to do this since Saito suggests in paragraphs [0048]-[0052] that using such detecting optical signals in the channels that represent a conversation of interest have advantage of allowing monitoring and identifying the related channels.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander et al (US Patent No. 5,986,782) in view of Kaharu et al (US Patent No. 5,130,836) and further in view of Hama (Pub. No.: US 2004/0202171 A1).

Regarding claim 9, Alexander as modified by Kaharu teaches all the aspects of claimed invention except fails to specifically teach the matching criteria comprises a marker specific to a communications protocol layer. However, Hama teaches the matching criteria comprises a marker specific to a communications protocol layer (see Fig. 2 and paragraphs [0072]-[0076]). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the matching criteria comprises a marker specific to a communications protocol layer as taught by Hama in the system of Alexander modified by Kaharu. One of ordinary skill in the art would have been motivated to do this since Hama suggests in paragraphs [0072]-[0076] that using such the matching criteria comprises a marker specific to a communications protocol layer have advantage of allowing identifying the related channels.

Allowable Subject Matter

10. Claim 30 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and overcome the 112 rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye, can be reached on (571)272-3078. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.


HANH PHAN
PRIMARY EXAMINER